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WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

OK

October 12, 2004

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor DWH

FROM: Gregg A. Galecki, Reclamation Hydrologist III GAG

RE: 2004 Second Quarter Water Monitoring, Canyon Fuel Company, LLC, Dugout Mine, C/007/0039-WQ04-2, Task ID #2008

1. Was data submitted for all of the MRP required sites? YES [x] NO [ ]
Identify sites not monitored and reason why, if known:

2. On what date does the MRP require a five-year re-sampling of baseline water data.
See Technical Directive 004 for baseline resampling requirements. Consider the five-year baseline resubmittal when responding to question one above. Indicate if the MRP dose not have such a requirement.

Re-sampling due date
Baseline sampling was conducted at the required sites during the 3rd quarter 2002.

3. Were all required parameters reported for each site? YES [x] NO [ ]
Comments, including identity of monitoring site:

Of the 24 total samples required for sampling this quarter, 23 sites were accessed – only Well GW-24-1 was not sampled. Well GW-24-1 is blocked and access to the water is no longer possible. No plans to correct the breach are anticipated. The Operator should take this well off the water monitoring schedule.

4. Were irregularities found in the data? YES [x] NO [ ]
Comments, including identity of monitoring sites:

Water quality in MD-1 (Old Johnson mine / Gilson seam) has changed significantly since spring 2002 when they started pumping the old workings. Dissolved Magnesium, Dissolved Sodium, Chloride, Sulfate and TDS have all increased since pumping began. However, flow is often reduced significantly since the site was thought to primarily be recharged from the old mine workings. These same parameters were slightly higher in the 1st quarter 2004, but decreased significantly in the 2nd quarter 2004. The increase has been attributed to no meteoric water being mixed with the water generated from the old workings, however the flow was only 0.2 gpm during the quarter and concentrations were still reduced. This condition will continue to be monitored.

At Stream site DC-1, increased concentrations observed last quarter returned to normal concentrations in the 2nd quarter 2004 with increased flow.

Well DH-1 observed abnormal increased in concentrations of dissolved Mg, Na, Bicarb, SO4, TDS, and Specific Conductivity beginning in the 1st quarter and continuing this quarter. No changes in precipitation or use of the mine-waste site have been observed that would attribute to the change. This will continue to be monitored.

Depth to water at Well GW-11-2 has returned to levels consistently noted prior to March 2003. Depth-to-water readings, collected in 2003, were approximately 140-feet below historical values. It is believed those readings were in error since the readings were hard to attain due to the depth. The inconsistency in attributed to the equipment. The probe was replaced in 2004 and the readings have returned to the pre-2003 readings to within 0.5 feet. The 2003 readings in the database have been modified to reflect this change.

5. Were DMR forms submitted for all required sites?

Identify sites and months not monitored:

1st month, YES [x] NO [ ]
2nd month, YES [x] NO [ ]
3rd month, YES [x] NO [ ]

Information for sites 001-004 (001- Mine Q, 002- Sed. Pond Q, 003 – 30K tank, 004 Waste Rock Sed. Pond) were reported electronically.

6. Were all required DMR parameters reported? YES [x] NO [ ]

Comments, including identity of monitoring sites:

7. Were irregularities found in the DMR data? YES [ ] NO [x]

Comments, including identity of monitoring sites:

UPDES site 001 (Mine Discharge) discharged a total of four (4) times during the 2nd quarter. Of the five (5) discharge events during the quarter, three (3) exceeded the 2,000 lb/day total limit on Total Dissolved Solids (TDS). Beginning on April 28, 2004, all the samples collected exceeded the 1-ton limit by an average of 2.2 tons. The daily maximum of 1 mg/l on Total Iron (T-Fe) was not exceeded during the quarter. As with site MD-1, this is discharge related to draining of the Gilson seam (Old Johnson Mine). The Gilson seam is thought to be recharged slowly from groundwater, however the workings have sporadically flooded to the point requiring emergency discharging of the water due to safety concerns. The flooding of the Gilson seam is a situation that continues to be monitored.

A total of three (3) discharges were noted from UPDES site 002 (Sed Pond) with very minimal flows – ranging from 0.26 gpm to 1.98 gpm. This was caused by a leak in the seal of a valve at the pond. The leak was fixed and no additional discharges are anticipated.

Dugout Mine is currently in the process of having their UPDES permit modified because of anticipated increased flows of high TDS and Fe water. The permit modification changing from a 'general' permit to an 'individual' permit is anticipated to be approved by January 2005.

8. Based on your review, what further actions, if any, do you recommend?

No further action is necessary for the 2004 2nd Quarter Water Monitoring data.